

**Notice of Allowability**

Application No.

10/759,457

Examiner

Toniae M. Thomas

Applicant(s)

HONG, KWON

Art Unit

2822

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 31 January 2006.
2. ☒ The allowed claim(s) is/are 8, 10 and 11.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance: the prior art of record does not anticipate or render obvious a capacitor substantially as claimed. For example, the closest prior art of record, Horii (US 6,255,187 B1) discloses a capacitor (see the embodiment of Figs. 1A-1G, 2 and accompanying text). The capacitor comprises the following elements: a metal pattern 70 made by a single material, wherein the material is capable of forming a conductive oxide (Fig. 1F and col. 7, lines 6-31); a seed layer 40 between the substrate and the metal pattern, wherein the seed layer can comprise Pt (Fig. 1F and col. 6, lines 8-13); a layer 140 covering an upper surface and sidewalls of the metal pattern 70, wherein the layer 140 can comprise Pt (Fig. 2 and col. 8, lines 53-56); a dielectric layer 80 (Fig. 2 and col. 8, lines 9-13); and an upper electrode 190 formed on the dielectric layer (Fig. 2 and col. 8, line 63 - col. 9, line 3). However, the Horii patent differs from the claimed invention in that the patent does not anticipate, teach, or suggest a lower electrode of a capacitor, wherein the lower electrode includes a metal pattern, a seed layer comprising Pt between a substrate and the metal pattern, and a layer comprising Pt that covers the upper surface and sidewalls of the metal pattern. Admittedly, layer 140 covers the sidewalls and upper surface of the metal pattern 70, as shown in Figure 2. Nevertheless, the lower electrode of Horii does not include layer 140. On the contrary, the lower electrode in Horii includes the metal pattern 70 and the seed layer 40. Layer 140 is part of

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the upper capacitor electrode (Fig. 2 and col. 8, line 63 - col. 9, line 3).

Moreover, there is no teaching or suggestion within the prior art of record to modify Horii such that the lower electrode includes a layer comprising Pt that covers the upper surface and sidewalls of the metal pattern 70.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toniae M. Thomas whose telephone number is (571) 272-1846. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMT  
17 February 2006

  
Zandra V. Smith  
Supervisory Patent Examiner  
21 Feb 2006